

AMENDMENTS

Please amend the application as follows:

In the Drawings:

Please replace drawing sheet 4 (showing Figs. 6-8) with the newly submitted figures attached herewith on a separate sheet.

In the Specification:

Please amend the Paragraph [0031] as follows:

In this regard, FIG. 1 depicts a texture map generating and editing system 30 in accordance with a preferred embodiment of the present invention. As shown by FIG. 1, the system 30 preferably comprises a texture map manager 32 for generating and editing a parametric texture map (PTM) 34. As will be described in more detail hereafter, each texel of the PTM 34 preferably comprises at least one polynomial texture equation that allows the texel's luminosity value to be calculated as a function of light position or some other variable parameter. As used herein, a texel's "luminosity value" refers to a value indicative of at least the texel's brightness. In this regard, a texel's luminosity value may only indicate brightness or may indicate another color parameter combined with the texel's brightness. For example, a luminosity value may be a value that is indicative of a texel's brightness, independent of the texel's color, or a luminosity value, in another example, may be a value indicative of both color and brightness.

Please amend the Paragraph [0053] as follows:

A preferred embodiment of the graphical display system 140 of FIG. 9 comprises one or more conventional processing elements 146, such as a digital signal processor (DSP) or a central processing unit (CPU), that communicate to and drive the other elements within the system 140 via a local interface 151, which can include one or more buses. Furthermore, an input device 154, for example, a keyboard or a mouse, can be used to input data from a user of the system 140, and an output device ~~[[156]]~~ 158, for example, a screen display or a printer, can be used to output data to the user. The adapter 152 is coupled to and renders to a display device 156.

Please amend the Paragraph [0054] as follows:

During operation, the graphics adapter 142 preferably receives graphical data (*e.g.*, primitives) from the graphics application 141 and renders the graphical data to the ~~output~~ display device 156. When a graphical object is being rendered by the graphics adapter 142, the texture mapper 143 may apply the texture defined by the PTM 34 to the surface of the graphical object. For illustrative purposes, assume that a graphical object being rendered by the graphics adapter 142 has a surface, referred to hereafter as the “textured surface,” to which the texture of the PTM 34 is to be applied.

Please amend the Paragraph [0080] as follows:

After the PTM 34 has been generated, the PTM 34 may be stored and used by the graphical display system 140 of FIG. 9. In this regard, continuing with the illustrative car seat example, the graphics application 141 may generate primitives defining the car seat. When the graphics adapter 142 is rendering a pixel of the car seat's surface, the texture mapper 143 preferably applies the PTM 34 to the pixel. More particularly, when rendering the pixel, the texture mapper 143 determines, in block 275 of FIG. 12, whether to perform the texture mapping methodology of FIG. 12 by determining whether the pixel defines a portion of the car seat surface defined by the PTM 34. If so, the texture mapper 143 maps one or more texels of the PTM 34 to the pixel, as shown by block 278.

Please amend the Paragraph [0084] as follows:

After color component values are assigned to the pixel in block 286 or 292, the pixel is rendered by the graphics adapter 142. The ~~output~~ display device 156 then displays the pixel based on the color component values assigned to the pixel by the texture mapper 143.

Please amend the Paragraph [0090] as follows:

For example, if the red color component is selected in block 446, then the manager 32 preferably retrieves the red color component of the measured luminosity value (L_{measured}). Therefore, the luminosity equation ~~later~~ generated in block 467 and stored in block 468 after a "yes" determination in block 457 preferably corresponds to a representation of the luminosity behavior of the selected color component only. As depicted by block 469, the aforescribed

process for defining and storing a color component luminosity equation for the selected texel is repeated for each different color component of the selected texel. Further, as shown by block 472, the process depicted by FIG. 14 continues until color component luminosity equations have been defined for all texels. Moreover, once the process depicted by FIGS. 13 and 14 is completed, each texel preferably comprises color component equations (L_{red} , L_{green} , and L_{blue}). Note that changes to the aforescribed algorithm depicted by FIGS. 13 and 14 or different algorithms may be implemented to generate a PTM 34 in other examples.

Please amend the Paragraph [0091] as follows:

FIG. 15 depicts an exemplary process for applying a PTM 34, such as one generated by the process depicted by FIGS. 13 and 14, that has texels defined by color component luminosity equations (L_{red} , L_{green} , and L_{blue}). When the graphics adapter 142 is rendering a pixel, the texture mapper 143 preferably applies the PTM 34 to the pixel. In this regard, when rendering the pixel, the texture mapper 143 determines, in block 515, whether to perform the texture mapping methodology of FIG. 15 by determining whether the pixel defines a portion of a surface of a graphics object, such as the car seat surface described above, defined by the PTM 34. If so, the texture mapper 143 maps one or more texels of the PTM 34 to the pixel, as shown by block 528.

Please amend the Paragraph [0096] as follows:

After color component values are assigned to the pixel in block 543 or 551, the pixel is rendered by the graphics adapter 142. The ~~output~~ display device 156 then displays the pixel based on the color component values assigned to the pixel by the texture mapper 143 in block 543 or 551.

Please amend the Paragraph [0110] as follows:

After calling or invoking a format-specific editor 686, as described above, the PTM editing tool 683 instructs the called format-specific editor 686 to perform ~~[[the]]~~ a desired spatial operation and provides the editor 686 with sufficient information for performing the operation. In response, the editor 686 performs the spatial operation, thereby helping to complete the desired edit of the PTM 34. Note that operations that do not depend on the PTM's format may be performed by either the PTM editing tool 683 or by at least one of the format-specific editors 686.